

REMARKS/ARGUMENTS

Claims 1-56 are pending in this application. Claims 1-11, 14-21, 25, 28-42 and 45-52 have been allowed. Claims 12 and 53-56 stand rejected.

In reviewing the Office Action, it appears also that claims 13, 22-24, 26-27 and 43 and 44 have also been allowed. See the paragraph numbered 5 of the Office Action. Allowable Subject Matter, where the Examiner states that [t]he prior art does not teach or fully suggest that, the inverter circuit comprising a single controllably conductive device in combination with all limitations recited in independent claims 1, 2, 3, 8, 13-14, 16, 22, 23, 26, 40, 43 and 49.” Based on the above, it would appear that claims 13, 22-24, 26, 27 and 43-44 have also been allowed.

Turning to the rejection of claims 12 and 53-56, first, the Examiner rejects claims 53-56 under 35 U.S.C. §112, second paragraph, as being indefinite. The Examiner objects to the term “inherently.” The term “inherently” has been removed from these claims. Accordingly it is submitted that the rejection under 35 U.S.C. §112, second paragraph, should be withdrawn.

With respect to the prior art rejection of claims 12 and 53-56, the Examiner has cited Konopka et al., U.S. Patent No. 5,994,847 and, in particular, Figs. 4 and 6 of Konopka.

Applicant submits that claim 12 is not taught or suggested by the Konopka reference. The operation of Applicant’s circuit, for example, the circuit shown in Figs. 3 and 4, is such that when the controllably recondutive switch 24 is opened, current flowing in the inductor 20 and in particular, the magnetizing winding 226, which is not a physically separate winding but part of inductor 20, must continue to flow. This creates a back emf across the inductor which induces a voltage across clamp winding 46. If the voltage across winding 46 is greater than the valley filled voltage at the output of valley fill circuit 830, then the diodes 56 and 57 will be forward biased. With these diodes forward biased, the voltage on winding 46 would be limited to the valley filled voltage. This winding 46 therefore acts as a clamp winding for transformer 18. See specification p.14, line 17 to p.15, line 13. As a result of this clamping action, current flows into the energy storage device 48 (see Fig. 4) from the clamp winding. According to claim 12, the current diverted by the clamp winding is the only current which recharges the energy storage device. Applicants note that the energy storage device is the energy storage device of the valley fill circuit.

In the Konopka reference, a charging circuit 500, shown in Fig. 4, is provided to recharge the energy storage device 240. Applicants note that there is a distinction between Konopka’s capacitor 240, the bulk capacitor, which is a primary energy charge device, and the capacitor 370,

which is described as a “clamp capacitor”. In contrast, according to claim 12, the current diverted by the clamp winding is the only current which charges the energy storage device of the valley fill circuit. The device of Konopka has a charging circuit 500 for charging the energy storage device 240. The transformer windings 350, 360 do not operate such that the current diverted by any of these windings is the only current which charges the energy storage device of the valley fill circuit. Accordingly, it is submitted that claim 12 is patentable over the Konopka reference.

Turning to claims 53-56, Applicant first notes that with respect to 56, this claim recites that the ballast input current in-rush is limited by providing in the inverter circuit an inductance coupled across the input terminals of the inverter circuit, “said inductance including a tap, said tap coupled to charge a primary energy storage capacitor of the electronic ballast”. This is shown, for example, by Fig. 4 in the present application. Applicant has reviewed the Konopka reference but has been unable to locate any teaching or suggestion of providing an inductance including a tap with the tap coupled to charge a primary energy storage capacitor of the electronic ballast.

Accordingly, Applicants submits that the Konopka reference does not teach or suggest the subject matter of claim 56.

Turning to the rejection of claim 53, Applicants have amended this claim to recite that the inverter circuit includes an inductive device coupled to a primary energy storage device and that the electronic ballast input current-in rush is limited by the operation of the single controllably conductive device, whereby when the single controllably conductive device become non-conductive, a voltage is developed across the inductive device to limit the in-rush current flowing into the primary energy storage device with the inductive device providing the only current for recharging said primary energy storage device. In view of the discussion with respect to claim 12, and the fact that Konopka utilizes a special charging circuit to charge the energy storage device, that is capacitor 240, it is submitted that the subject matter of claim 53, as amended, is not taught or suggested by Konopka.

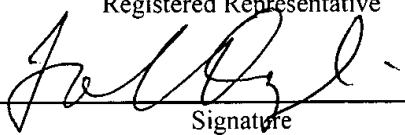
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In view of the above, Applicants request reconsideration and submit that all claims in this application are now in condition for allowance, prompt notification of which is requested.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on February 6, 2004

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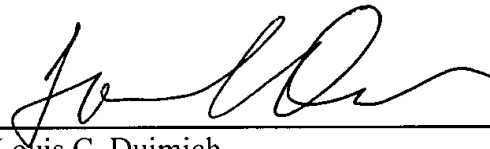


Signature

February 6, 2004

Date of Signature

Respectfully submitted,



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